Archaeological Research in Central America

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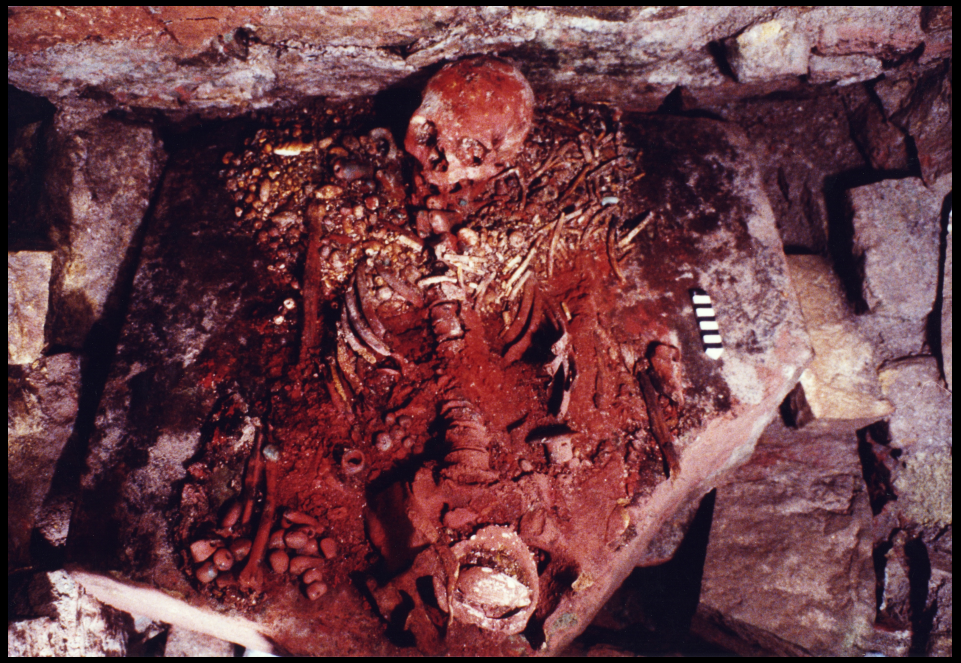
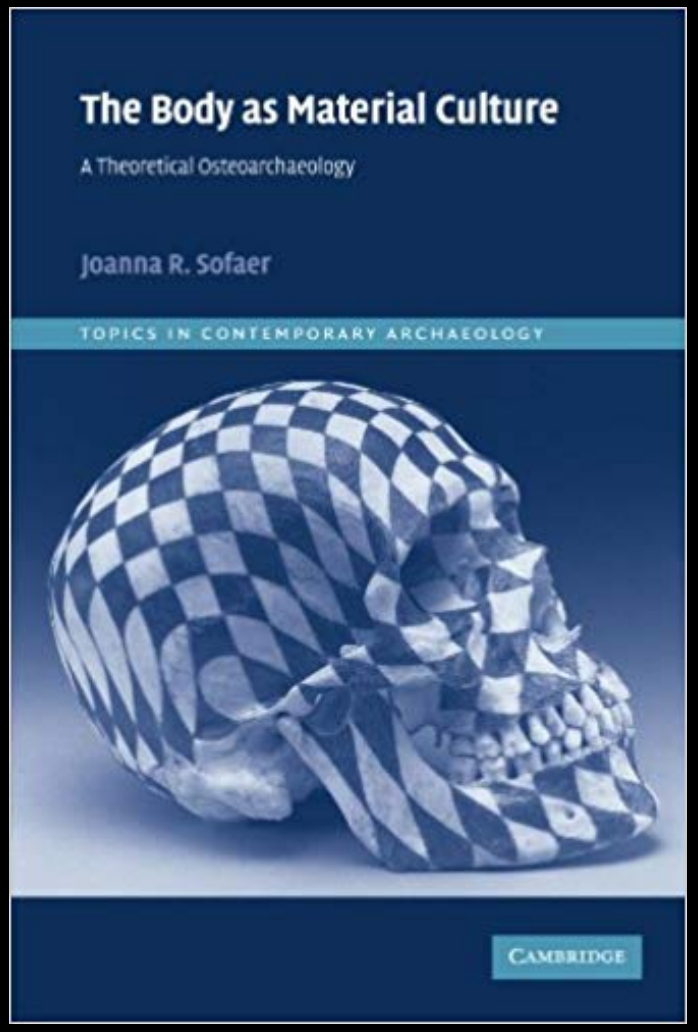
* Human Remains Shown in Presentation *

Why Bioarchaeology?

- Archaeological understanding of body
  - Biological but marked by the social, spiritual, and cultural contexts
  - Most important object of material culture



Margarita Tomb, Photo: L. Traxler



Sofaer (2006)

Manifestations of Inequality

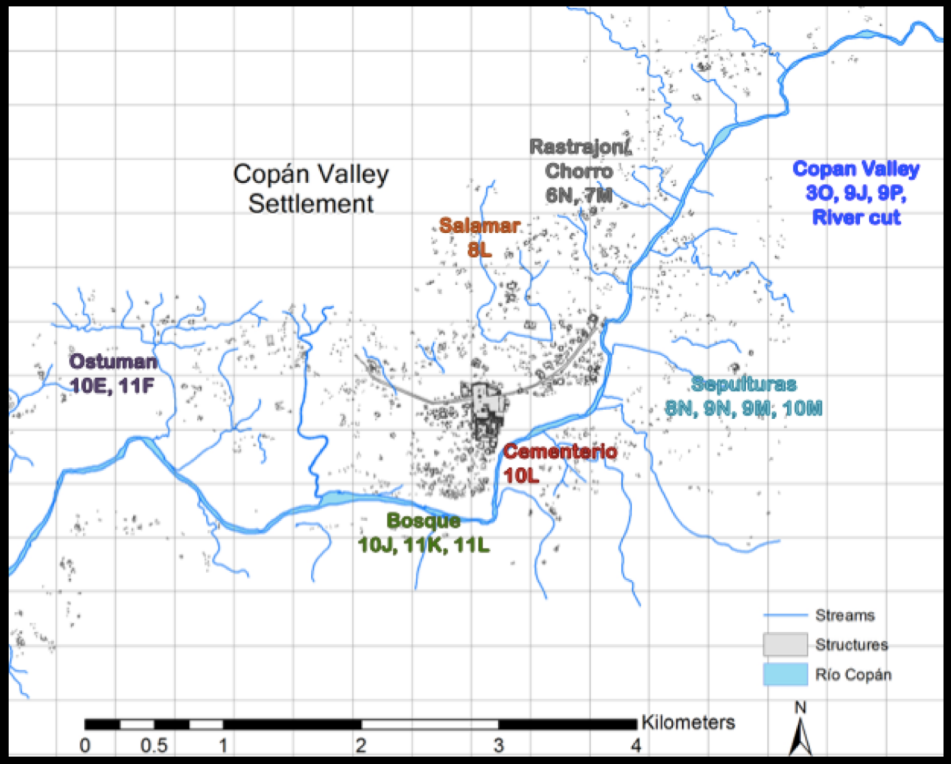
- Methods:
  - Chemistry, Statistics, & Bioarchaeology
- Major Themes:
  - Impact and mechanisms of migration in past
  - Slavery and colonialism in the past
  - Social dynamics of marginalized groups
- Current Sites:
  1. Copan, Honduras
  2. Tayasal, Guatemala
  3. Belize City, Belize

Google Maps.

1. Inequality in Prehistoric Honduras

- Previous work on the Classic Period Maya at the ancient city of Copan, Honduras, ca. AD 600-820
  - Kinship, Migration, Social Organization
  - Is migration a reflection of inequality or dependency?

Hieroglyphic Staircase, Photo by Author.



Copan Valley, After Richards-Rissetto.

Stela A, Photo by Author.

Ancient Maya Neighborhood

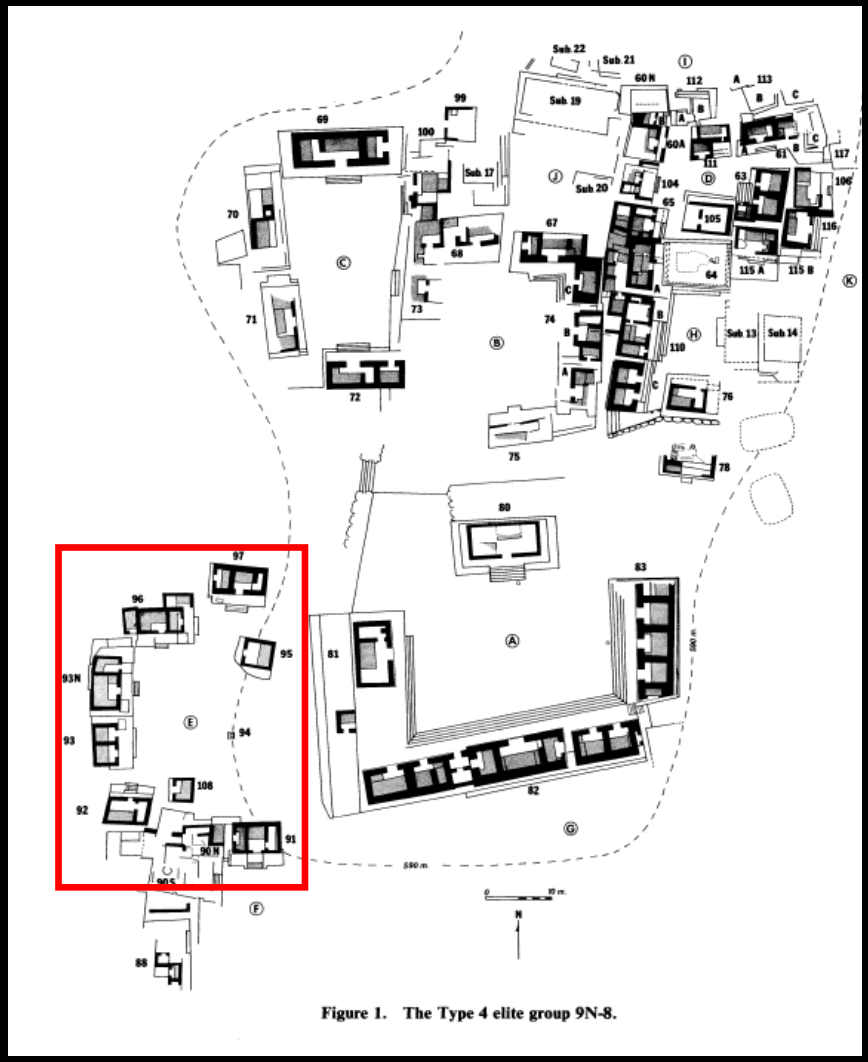
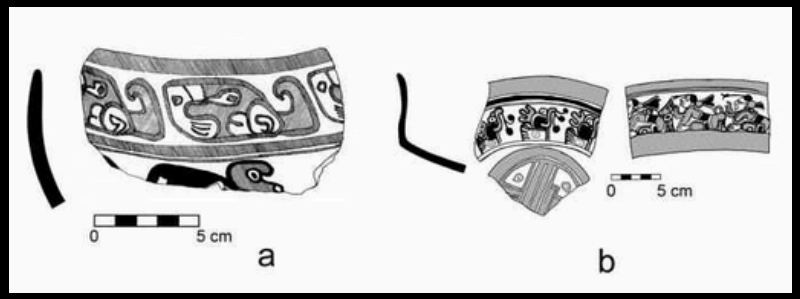


Figure 1. The Type 4 elite group 9N-8.

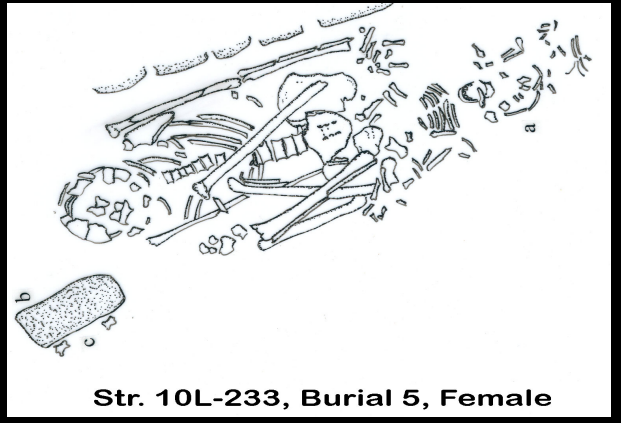
Group 9N-8, Copan. Map by Fash (2001). Photos by Author.

Material Culture

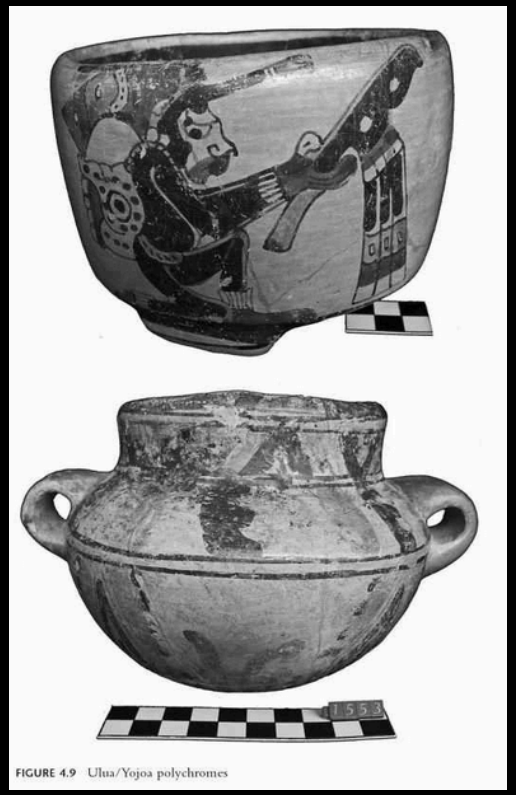


Copador variety (Local) (Bill 2014)

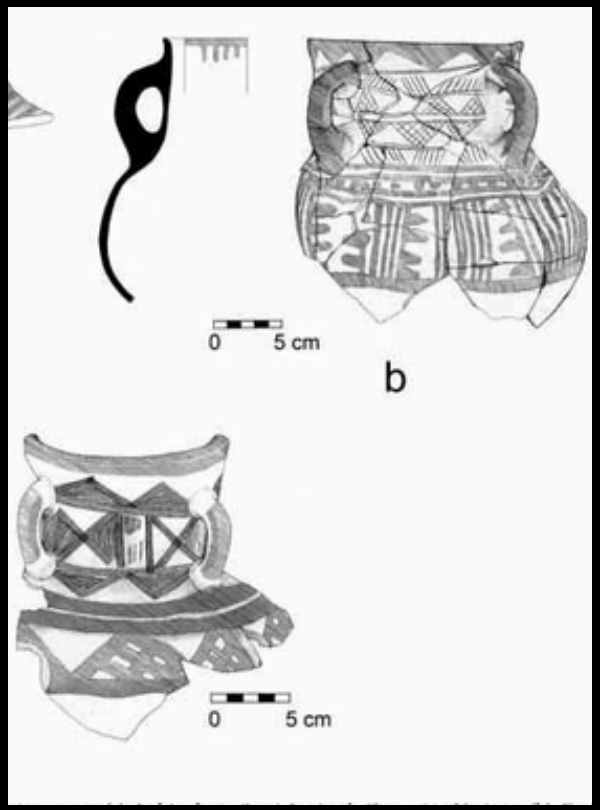
Group 11K-6 (Maca)



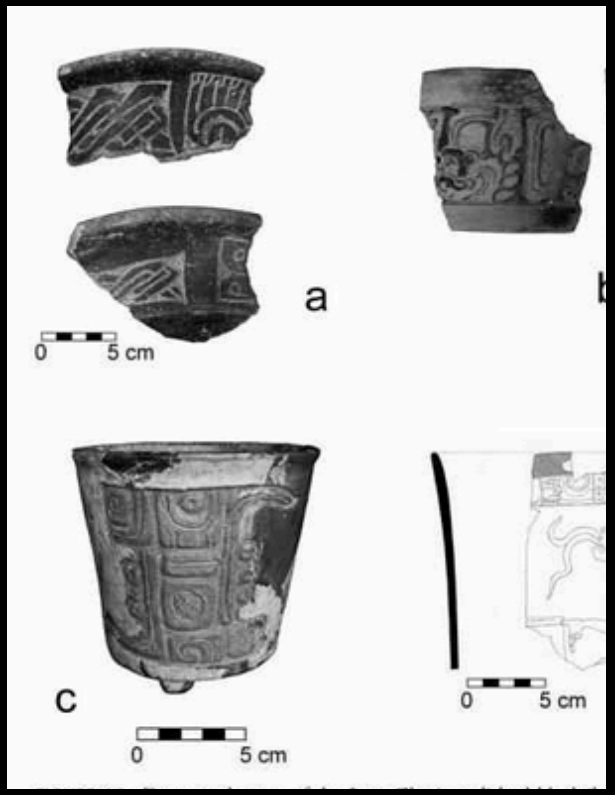
Group 10L-2 (Andrews)



Ulua variety (Bill 2014)
(Imported, NW Honduras)



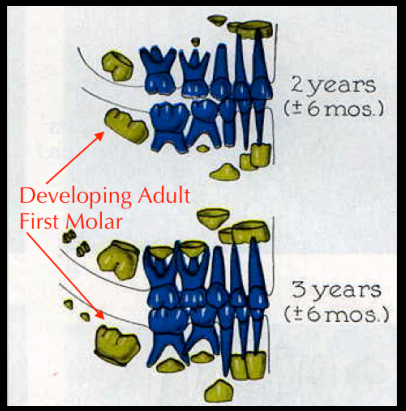
Jicatuyo variety (Bill 2014)
(Imported, Central Honduras)

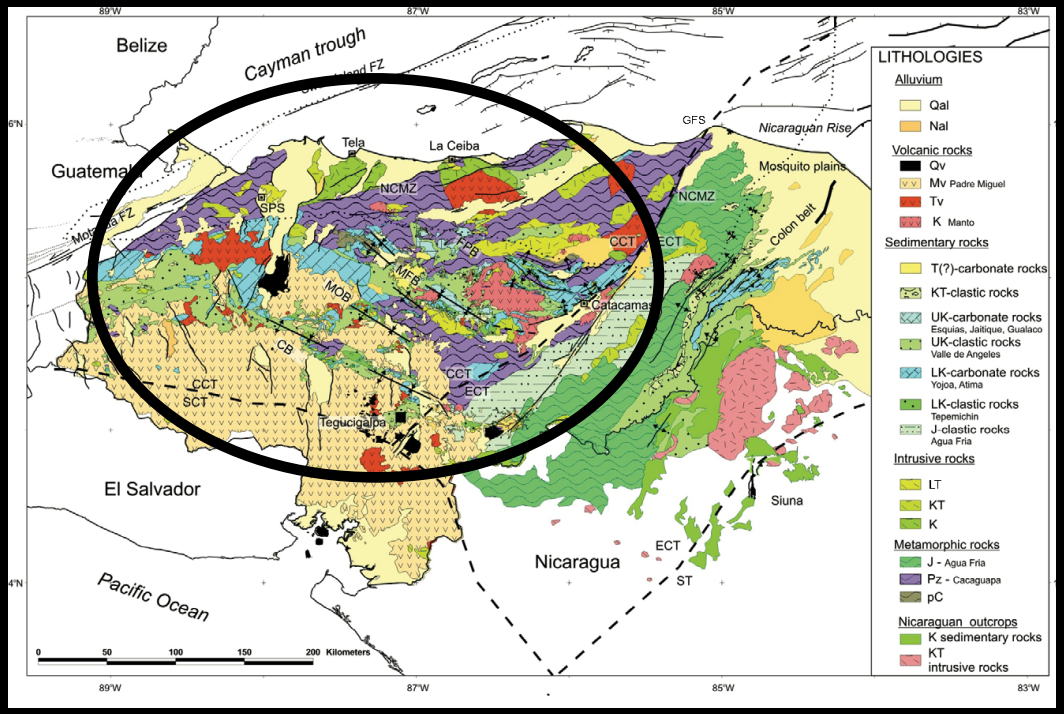


Polished Black/Brown (Bill 2014)
(Local)

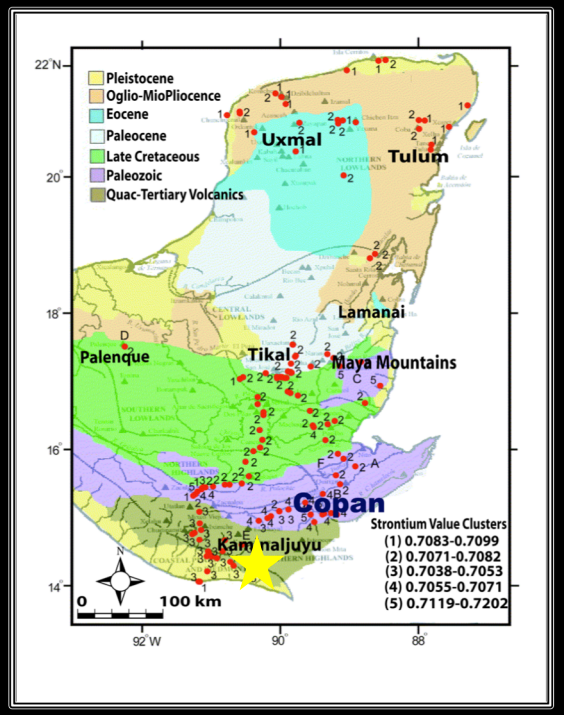
Biogeochemistry

- Radiogenic strontium isotopes ($^{87}Sr/^{86}Sr$) identify change in long-term residence based on underlying geology from which humans were deriving their food and water
- Enamel does not remodel after formation in childhood, thus $^{87}Sr/^{86}Sr$ values reflect an individual's "original" residence





Geological map of Honduras (Rodgers 2003)



Hodell et al. Baseline (2004)

Sr references: Ericson 1985; Knudson et al. 2004, 2007; Price et al. 1994a,b, 2000, 2008, 2010; Sealey et al. 1991; Sillen et al. 1989; Wright 2005

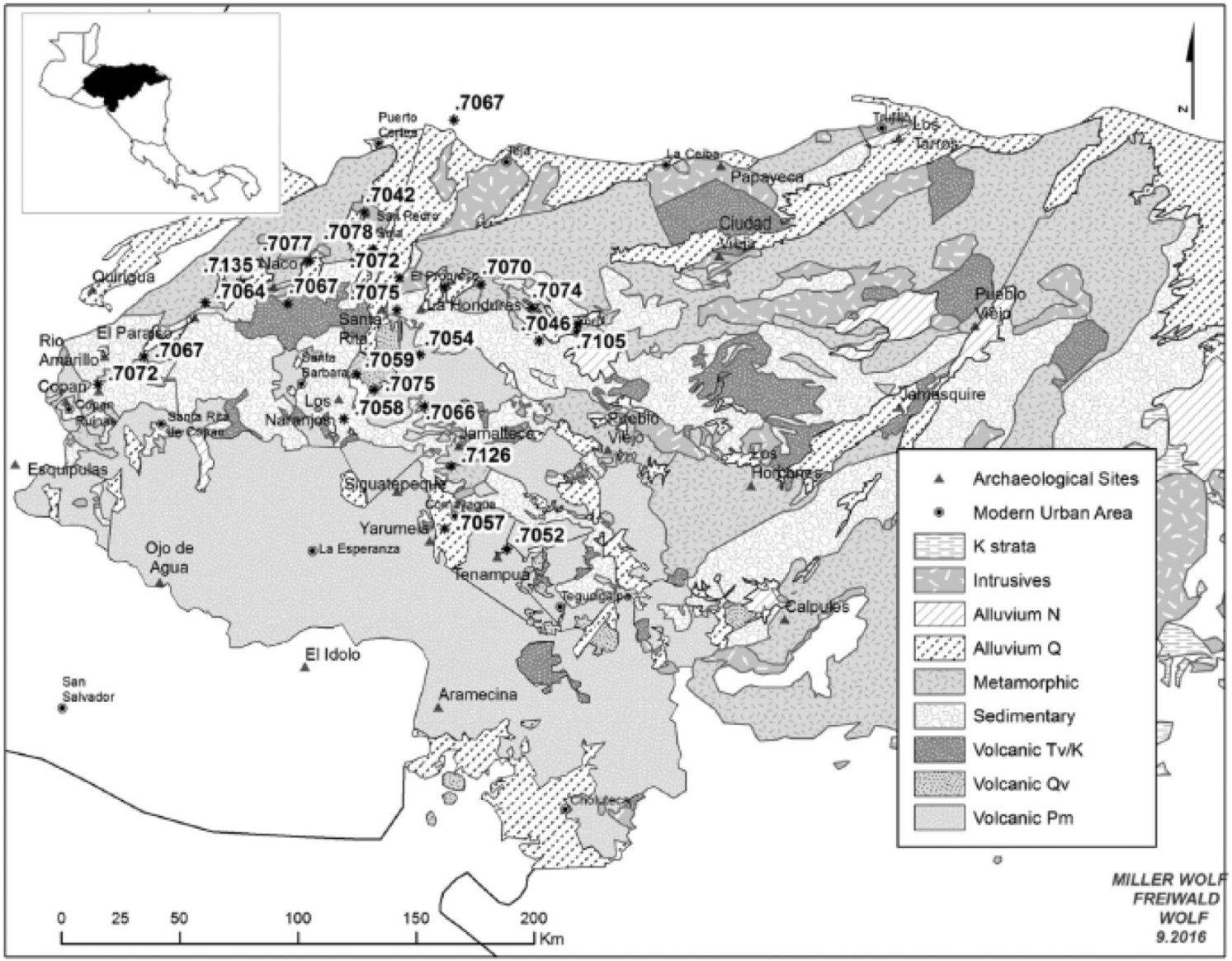
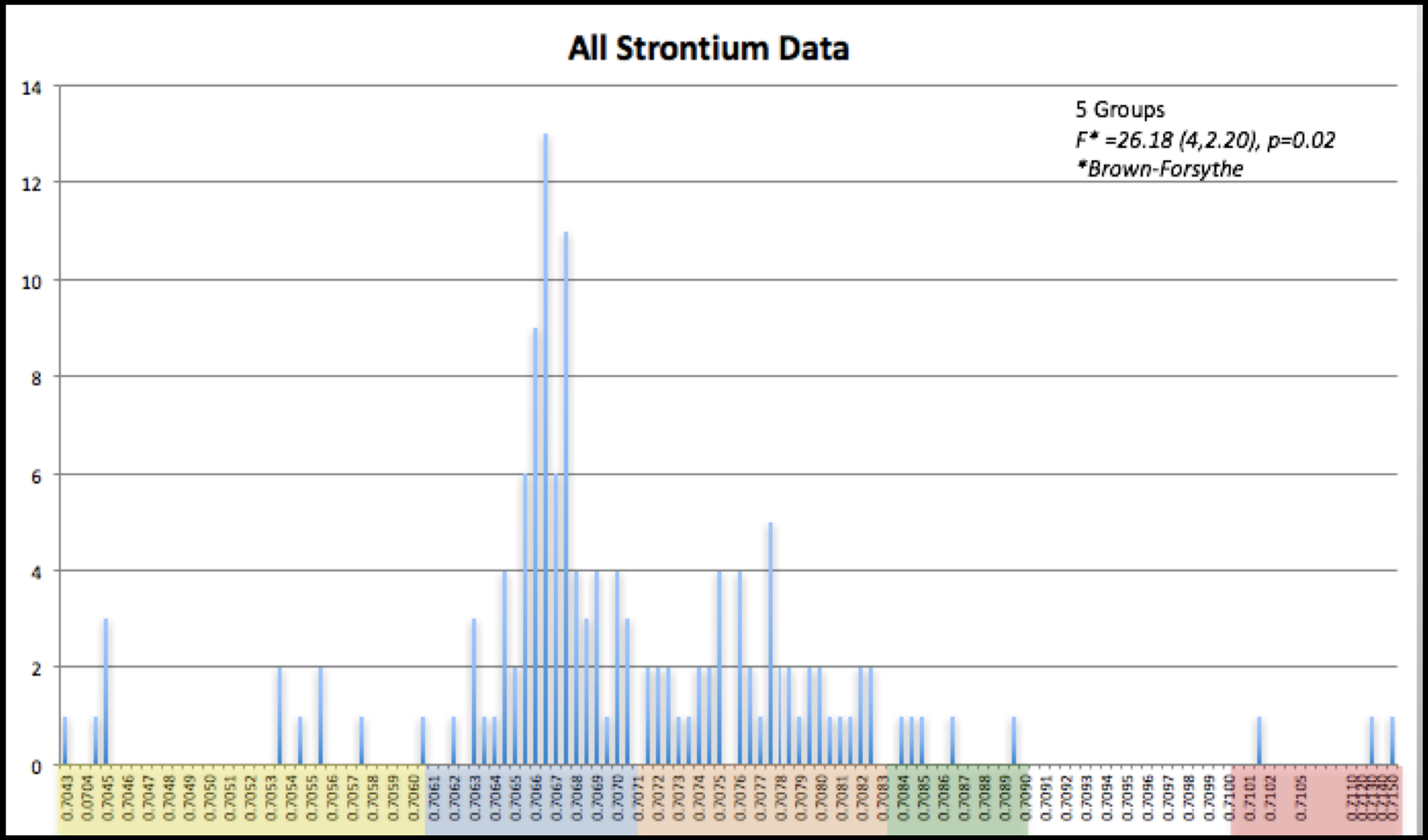


Fig. 3. Map of strontium isotope values in central and western Honduras. Geological substrates are drawn from Rogers et al. (2007:68, Fig. 2) as follows: Cretaceous Sedimentary (K strata); Late Tertiary, Cretaceous Tertiary, and Cretaceous Intrusive (Intrusives); Neogene Alluvium (Alluvium N); Quaternary Alluvium (Alluvium Q); Jurassic, Paleozoic, and Precambrian Metamorphic (Metamorphic); Tertiary, Cretaceous, Cretaceous-Tertiary, Upper Cretaceous, Lower Cretaceous, and Jurassic Carbonate and Clastic Sedimentary (Sedimentary); Tertiary and Cretaceous Volcanic (Volcanic Tv/K); Quarternary Volcanic (Volcanic Qv); and Miocene Volcanic (Volcanic Pm).

$^{87}Sr/^{86}Sr$ Data



Sepulturas, Group 9N-8, Patio E
Migration as Economic Necessity?
Mutually dependent social dynamics?

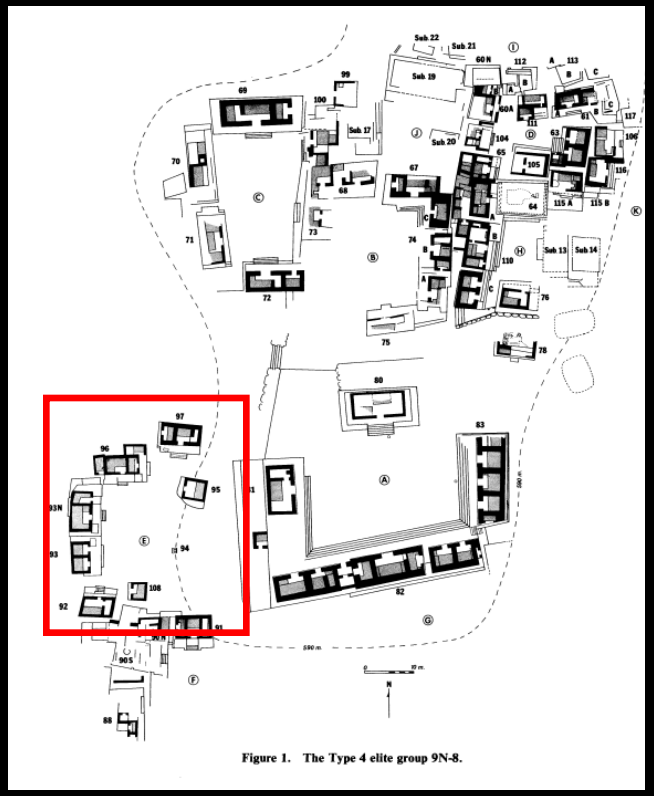


Figure 1. The Type 4 elite group 9N-8.

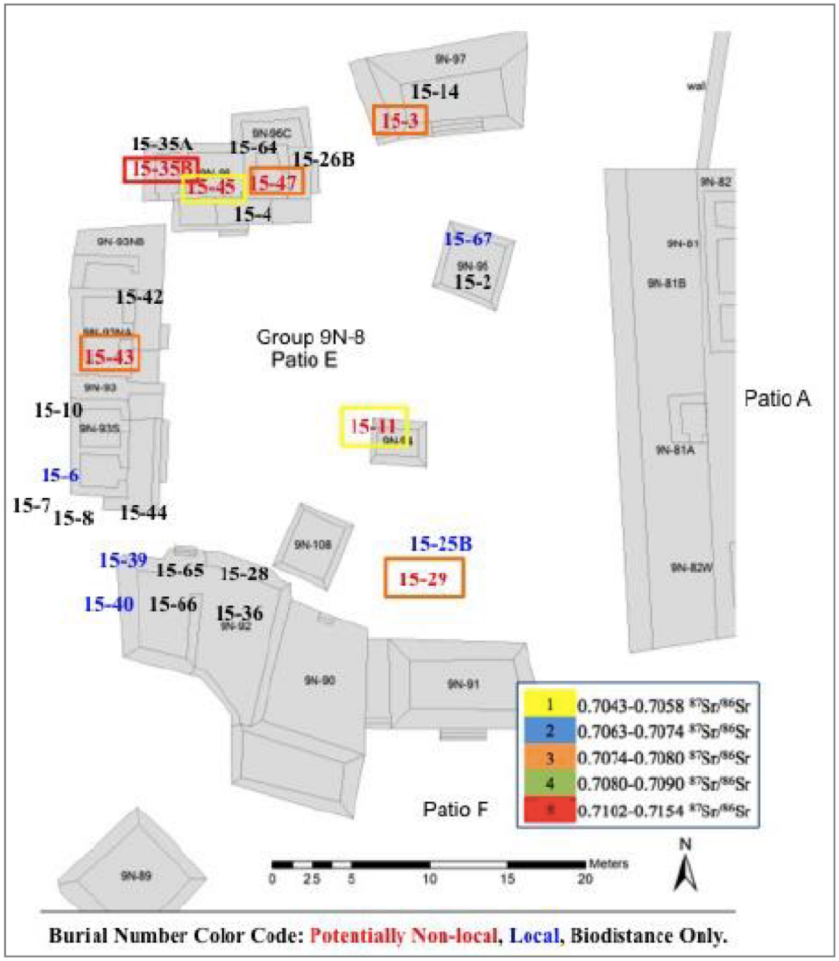


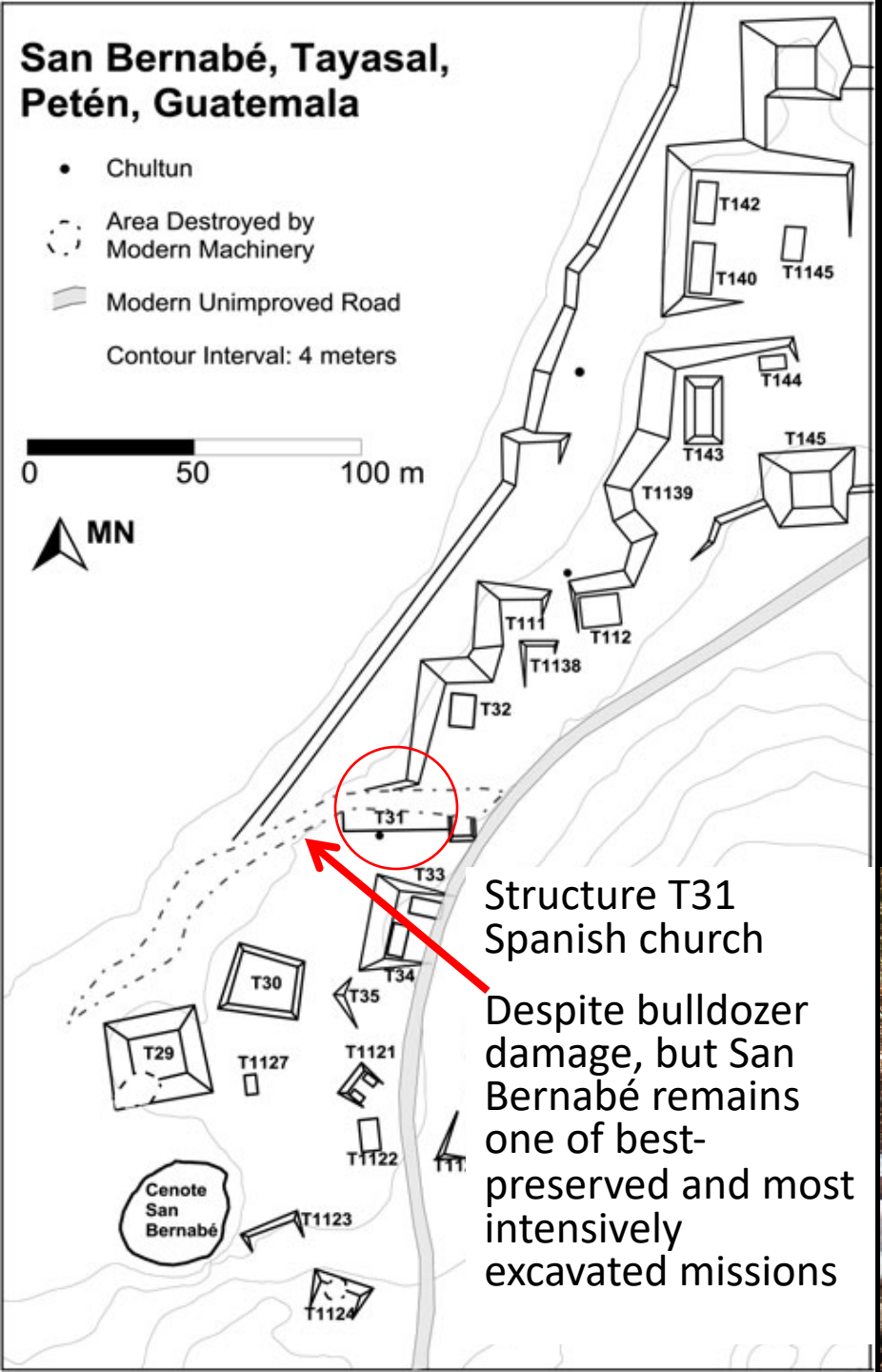
Figure 30: Map of Sepulturas Group 9N-8 sample, Patio E. After K. Landau from Richards-Rissetto's (2010) digitization of the Fash and Long (1983) map.

2. The Spanish & The Itzá Maya

Google Images

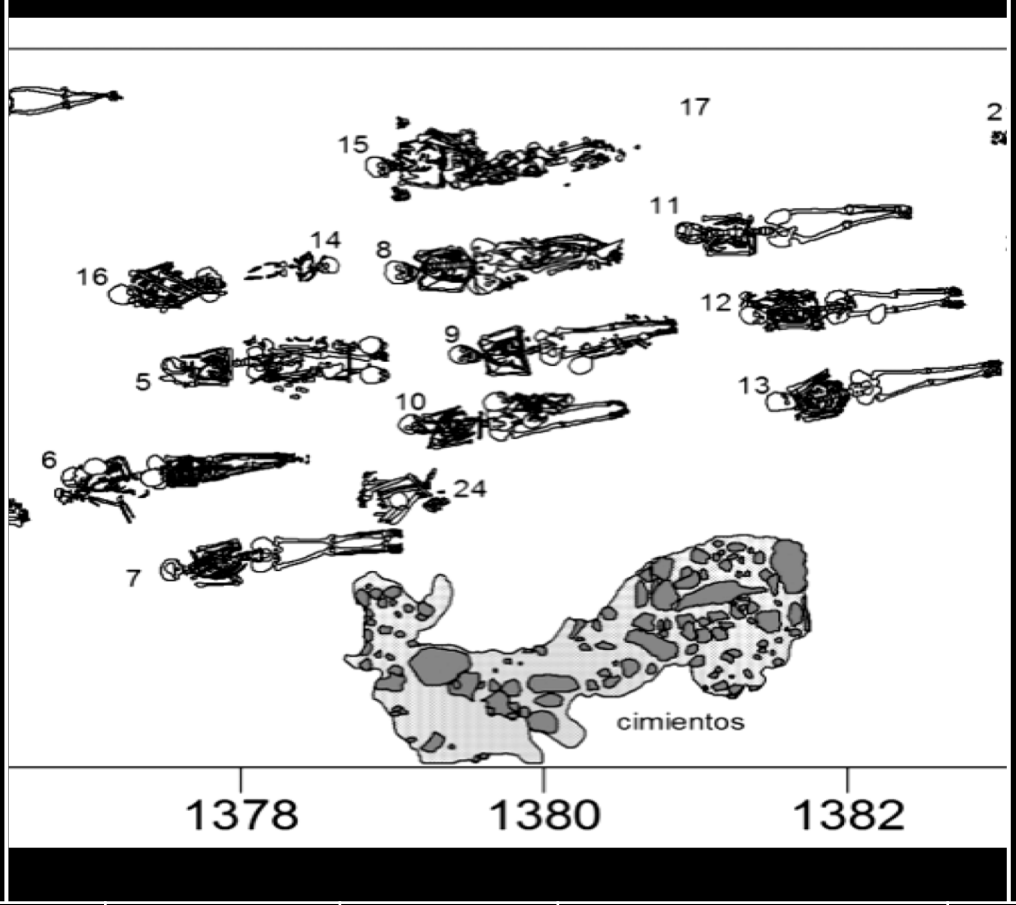

St. Joseph.
St. Andres
St. Geronimo
St. Bunabe
Concepcion
St. Miguel
Castillo
Embarcadero

2010-2011 excavations



Structure T31 Spanish church

Despite bulldozer damage, but San Bernabé remains one of best-preserved and most intensively excavated missions



San Bernabé	Female	Male	Undetermined	Total
Infant < 2	0	0	2	2
Child 3-12	0	0	10	10
Adolescent 12-20	0	0	3	3
Young Adult 20-35	10	7	0	17
Adult 35-50	7	6	2	15
Total	17	13	17	47

Photos by author.

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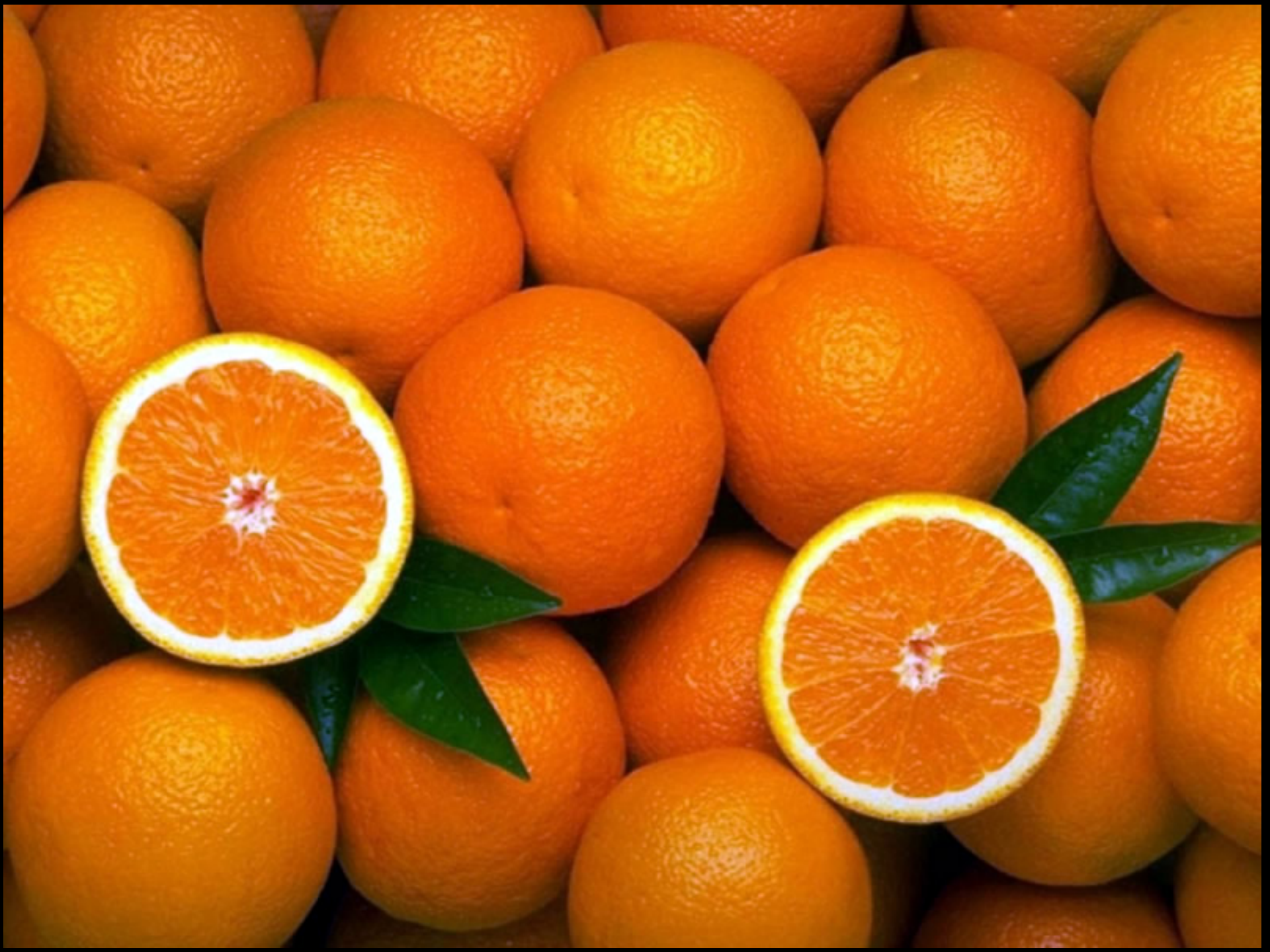
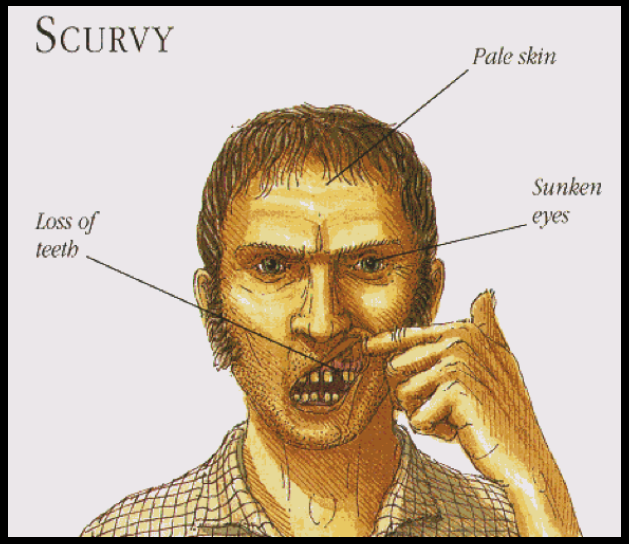
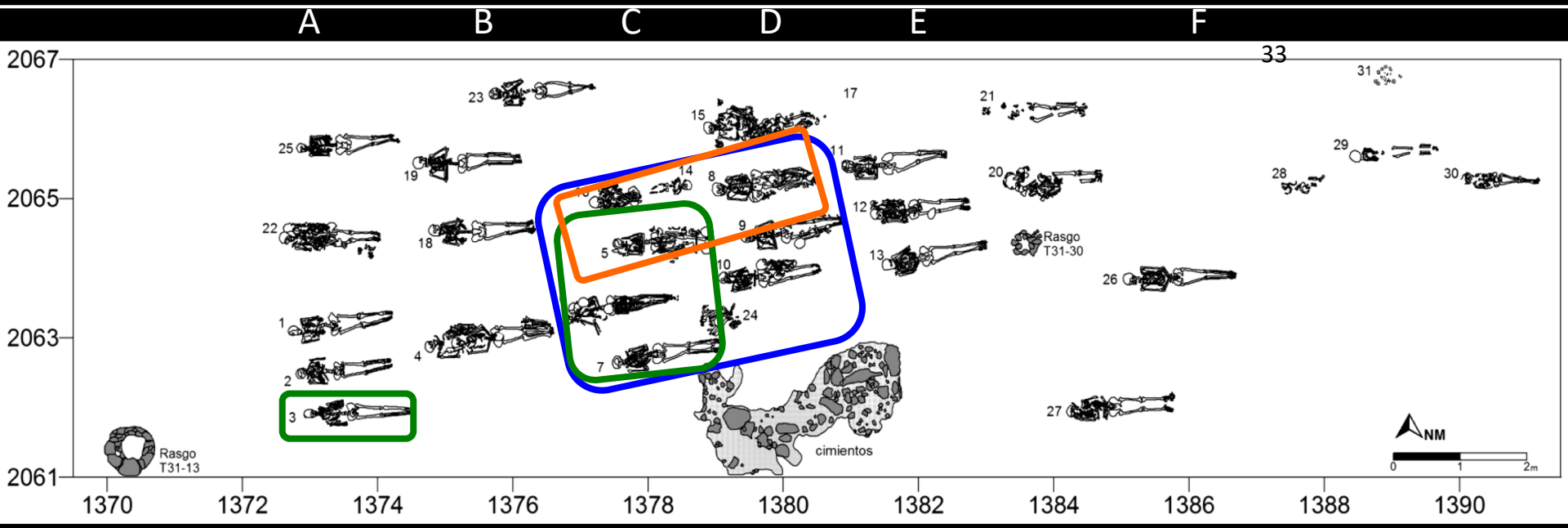


Scurvy



Google Images.

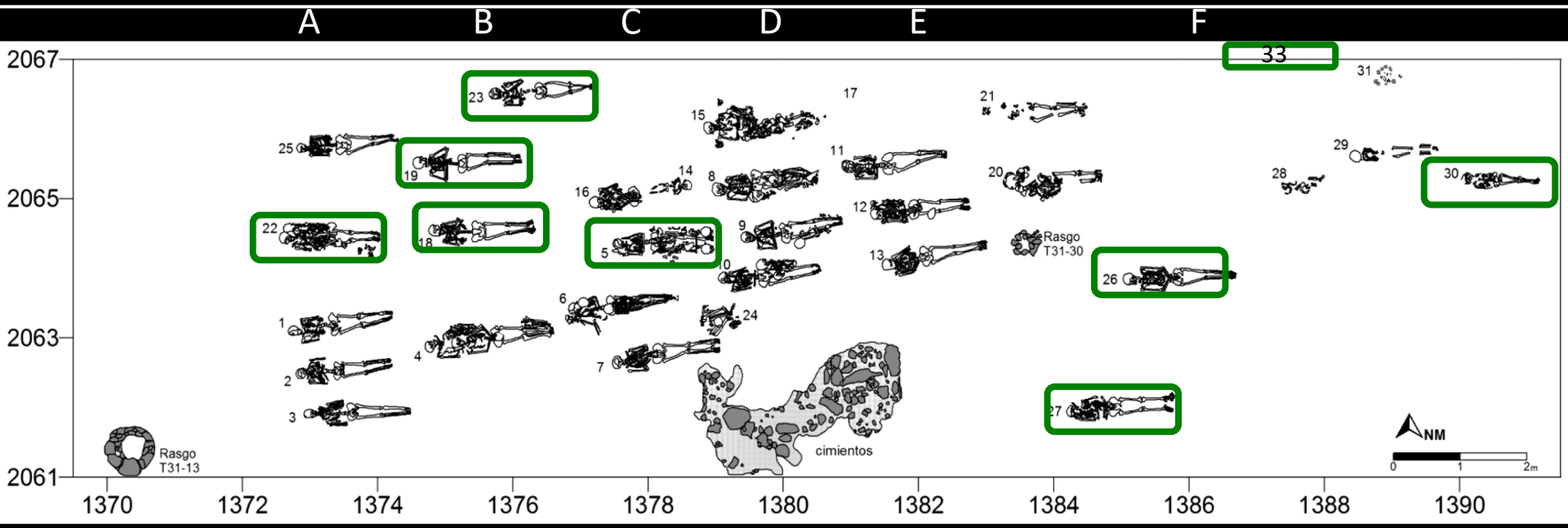
Dental Morphological Data



Cluster 1: Rows C & D and Burial 3
Cluster 2: 5a, 5b, 5c, 8a, 8b, 14, 16
Cluster 3: 5a, 5b, 5c, 6a, 6b, 6c, 7

Map by Tayasal Archaeological Project

Skeletal Indicators of Scurvy

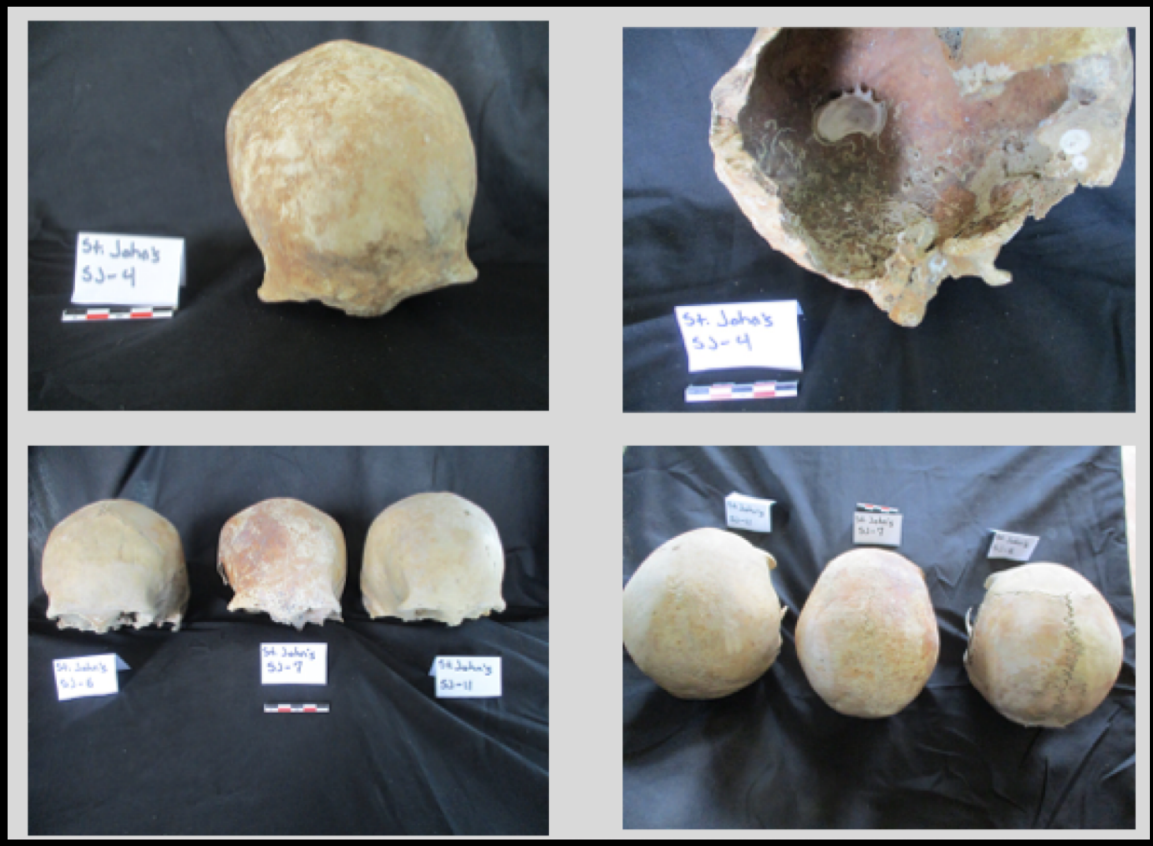


Photos by author

3. British Colonialism & Slavery in Belize City

Evidence of Slavery and Inequality

- Quiroz obtained the 12 skulls
- Trauma
- Disease
- Died young
- Ancestry from three groups with differences between males and females
  - Males were African or Maya
  - Females were African, Maya, European (with signs of terrible stress during life), or combination ancestry



The Sample

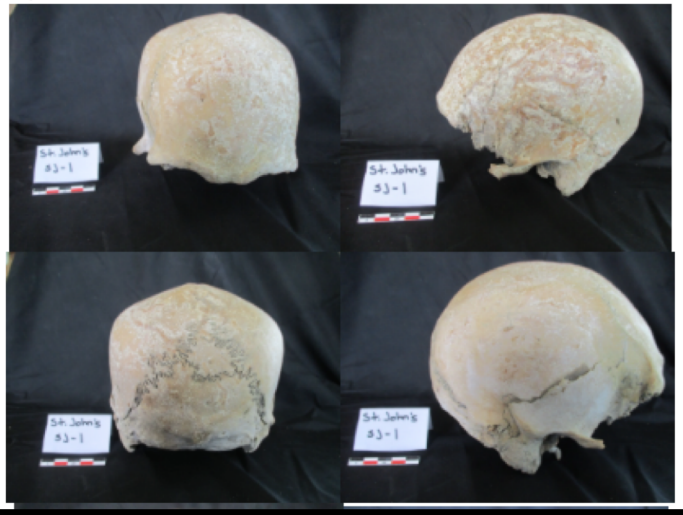
St. John's College Skeletal Collection
Preliminary Report
12 July 2016
Dr. Katherine Miller Wolf and Dr. Hannah Plumer

Inventory:

St. John's #	Sex	Age	Estimation of Ancestry
1	Male	30-40	African
2	Male	30-40	African
3	Male	40-50	African and European
4	Male	40-50	African
5	Male	30-40	Maya
6	Female	25-35	European
7	Female	40-50	European
8	Female	30-40	African
9	Female	25-35	European
10	Female	45-50	European and African
11	Female	50-55	European
12	Female	Adult	Undetermined

Images:

St. John's 1:



The Sample

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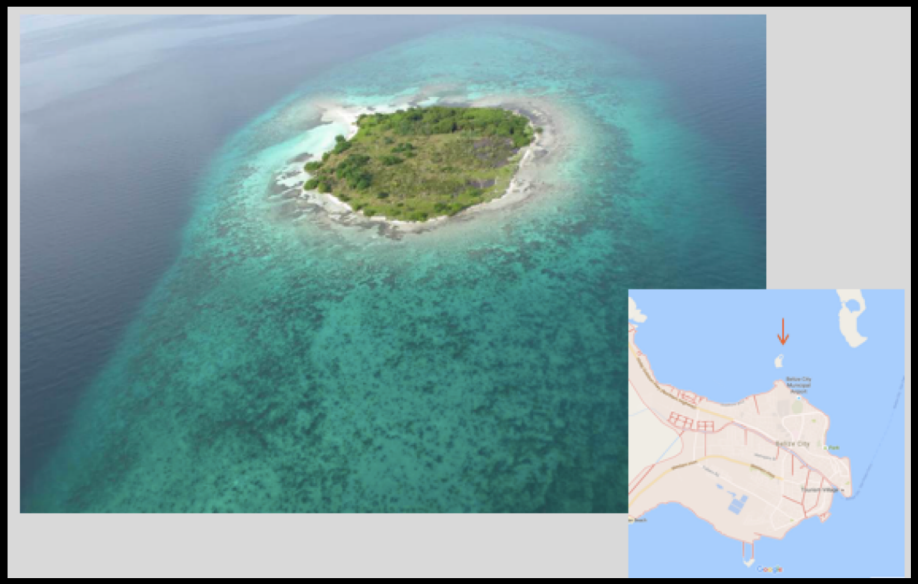
Belizean History

- Ancient Maya from 1500 BC – 1200 BC, Contemporary Maya
- 1638 Contact due to English shipwreck
- By 1788, Belize was a British colony
- Enslavement of native peoples, exploitation of Mahogany
  - Slavery of Maya (1640), of Africans (1724), and continued slavery-like oppression of Kriol, Maya, and poor European women

Evidence of Slavery and Inequality

Evidence of Asymmetrical Dependency and Inequality

Mojo Caye, ¼ mile from Belize City



Hick's Caye, 8 miles from Belize City

- 70+ individuals, including men, women, and two children with similar demographic profile
- Collaboration with historians is key:
  - Epidemics of Typhoid, Yellow Fever, and Influenza
  - 1918-1919 Influenza cased 100,000 deaths in the British Caribbean
  - Greatest mortality among laborers and slaves, especially males 15-40 years of age

Thank You

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